

Victoria Bridge
(Victoria Avenue Bridge)
Spanning Tequesquite Arroyo
Riverside
Riverside County
California

HAER No. CA-122

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
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HISTORIC AMERICAN ENGINEERING RECORD

VICTORIA BRIDGE (Victoria Avenue Bridge)

HAER No. CA-122

Location: Spanning Tequesquite Arroyo, Riverside, Riverside County, California

Date of Construction: 1928

Type of Structure: Vehicular bridge

Designer/Engineer: R.V. Leeson

**Fabricator/
Builder:** DeWaart and Son, contractors

Significance: The Victoria Bridge was constructed to provide a convenient route between the agricultural and business areas of Riverside, becoming a vital link for transportation from the citrus groves to the packing houses. The bridge is also considered to be one of Riverside's most prominent architectural and engineering features.

Project Information: Documentation of the Victoria Bridge was completed by the Historic American Engineering Record (HAER), administered by the National Park Service, Department of the Interior, as part of the California Citrus Heritage Recording Project undertaken during summer 1991. For more information on this project refer to HAER No. CA-118 (California Citrus Heritage Recording Project, Riverside, Riverside County, California).

Christopher Foord, HAER Historian, 1991
Christine L. Madrid, HAER Historian, 1993

HISTORY

The completion in 1891 of the original Victoria Bridge over Tequesquite Arroyo provided a direct link between the developing Arlington Heights agricultural area and the downtown section of the city of Riverside, California. This vital link, an extension of the tree-lined Victoria Avenue designed by Franz Hosp, provided a convenient route from the nearly six thousand acres of citrus groves in Arlington Heights to the packing house district of the city that fronted along the tracks of several rail lines. The first Victoria Bridge served the city for 37 years. During that time the wooden timbers of the bridge gradually weakened due to the stresses of increased motor traffic and the installation of electric street cars. The old wooden span over the arroyo was demolished and then replaced in 1928 by the reinforced concrete bridge that still serves the public.

The idea of a bridge to span the deep arroyo was conceived by pioneer Matthew Gage, creator of the 21-mile long Gage Canal which watered Arlington Heights, a full seven years before its actual construction. To see the bridge become reality, a lot had been conveyed to Gage in 1884 by Priestly Hall who had subdivided the area known as Hall's Addition and later as the Victoria Hill area, and which overlooks Tequesquite Arroyo.¹

In a speech made at the opening ceremonies for the bridge on Thanksgiving Day (November 26), 1891, Gage freely admitted his motive, and that of the Riverside Trust Company, Ltd. which had financed the structure and was then developing the Arlington Heights area, "was a selfish one, viz., that it might enhance the value of every acre of our Arlington Heights by making it easily accessible . . ." Gage, however, tempered his confession by saying that:

My motto has always been, 'Riverside first, last, and all the time.' We want no East Riverside, no Casa Blanca and no Arlington Heights as a business center . . . but only want one commercial center, where we will have schools, churches, and places of intellectual entertainment, and those to fill them, that we may build up ourselves, and be an attraction to others.²

The original bridge was designed and engineered by William Irving, chief engineer for the Riverside Trust Company, and prior to that position, chief engineer on the construction of the Gage Canal. He was also Matthew Gage's brother-in-law. The design of the bridge was described as a "cantilever truss," constructed of an estimated 213,000 feet of lumber. Construction began in September 1891. Granite blocks laid on bedrock served as foundations. When completed the bridge was 560' long, 60' high at its greatest point, and had a floor 30'-6" wide. Its weight capacity was estimated to be 300 pounds per square foot.³

The occasion of its Thanksgiving Day opening turned into a gala event, in spite of a lack of publicity surrounding the ceremony, which began at 2:30 p.m.⁴ The bridge itself had been decorated by a volunteer committee with flags and flowers. The north end was carpeted for the participants of the formal dedication and was partially folded back to expose the plank where the last spikes would be ceremonially driven. William Irving performed the duties of master of ceremonies, calling representatives of various city groups to come forward and drive the spikes. The final gold-gilded spike was driven home by Mrs. Margaret Jane Gage, 81-year old mother of Matthew Gage. When her task was completed, the event was celebrated with music played by the Knights of Pythias band. Matthew Gage then delivered his speech formally opening the bridge, concluding, "Use it, and enjoy it." The Knights of Pythias then led a procession of horses, carriages, and pedestrians across the bridge. Mrs. Gage's phaeton was the first to cross, pulled by seven of her grandchildren.⁵

In 1894 the Hall's Addition Railroad extended its mule driven trolley line across the bridge. In January of the following year, the Trust Company gave the bridge to the city, though the formal transfer of the deed did not occur until 1898.

By 1899 electric trolley service had apparently been installed across the bridge by the Riverside & Arlington Railway. Together with the city, the rail company paid the expenses of having the bridge reinforced to accommodate the heavier rail cars.⁶ Electric trolley service ended in 1924, partly due to the expense of maintaining the bridge, but more because of the advent of increased automobile traffic. Indeed, it was this increase in auto traffic that eventually led to the city's determination that the bridge was no longer safe.⁷

Thus, on February 15, 1928 construction of a new concrete bridge over the arroyo was begun. It was completed on August 15 of the same year. The new bridge was designed by R. V. Leeson of Los Angeles. The construction firm of DeWaart and Son was contracted to build it. L. DeWaart, Jr. supervised the actual work. When completed:

Three main arches form[ed] the length of the bridge, which extends 522 feet from side to side of the arroyo. Each arch has four arch ribs, and the point highest from the floor of the arroyo is 70 feet.

The footings on either side of the bridge rest on solid rock, and the piers which support the structure are also of rock.

Each arch of the bridge has within it six smaller arches, making a beautiful and symmetrical whole.

A three foot railing extends the length of the bridge on either side, making a support for the sidewalks which are at either side of the 30-foot road. These railings are pierced in arch design. The sidewalks are five feet wide.

Twelve light posts provide for illumination. Each post stands eight feet from the top of the railing, and the posts themselves, of marbelite [sic] construction, blend well with the feeling of the structure. An ornamental globe tops each post.

The floor of the bridge is 11 inches thick at the center and 10 inches thick at both sides. An 18-inch crown provides adequate curvature for the roadway. Drain pipes at 25-foot intervals will take care of draining the bridge top during wet weather.

Supporting columns are 13 feet apart, and provide great strength for the structure.

Provision for pipes and wires for public utilities is made beneath the floor of the bridge.⁸

Materials used in the construction included:

20,000 sacks of cement; 2077 cubic yards of Class A concrete for the upper portions of the bridge; 1400 cubic yards of Class B cement for the footings; 500 tons of rock; 400 tons of sand and 121 tons of reinforced steel, most of which is in the arches.⁹

Also included in the materials list were 1400 square feet of macadam surfacing, 38 roadway drains, two storm drains, and 89 cubic yards of railing above the curb.¹⁰

The opening and dedication ceremony for the new bridge was held on September 18, 1928 at 3:00 p.m. Among the dignitaries was J. Norman Irving, son of William Irving and nephew of Matthew Gage, who reminisced about witnessing a similar occasion in 1891 when he had been one of seven children

who had pulled his grandmother's carriage over the original bridge. Norman Irving then unveiled a bronze plaque commemorating the original wooden bridge, the inscription on which read:

This bridge is erected on the site of the original Victoria Bridge, constructed by the Riverside Trust Company, Ltd., under the direction of Matthew Gage, managing director and opened and presented to the city of Riverside November 26, 1891. Designed and built by William G. Irving, C.E., engineer of the company. The building of the Gage Canal by Matthew Gage and the development of Arlington Heights by reason thereof added immeasurably to the wealth and prosperity of Riverside and made necessary the erection of a bridge across this arroyo.¹¹

The plaque has since disappeared.

In late 1979 the bridge was inspected by the California Department of Transportation (Caltrans). Their report suggested that heavy traffic over the previous two years may have contributed to a serious undermining of the bridge's stability. Caltrans had inspected the bridge before in 1977, and concluded that lower weight limits needed to be applied to the bridge: that it was not capable of bearing the heaviest weight limits allowed by law without sustaining damage.¹²

Caltrans forwarded the 1977 report on the bridge to the Public Works Department where it was given to William Gardner, chief engineer. Gardner decided to "just sit on it and not stir up the water. The trash trucks, school buses and trucks might be affected. They might be re-routed." In 1980 Gardner stated that at the time, "I didn't consider it high priority. The bridge had functioned for 50 years, so is it worth it to stir up problems it would create. The bridge seemed to be doing OK." When the report of the 1979 inspection was published, Gardner admitted that his original conclusion had been probably been erroneous. Since that time, lower weight limits have been posted on the bridge.¹³

In October 1980, plans for the repair of cracks in the bridge by means of epoxy injectors were drawn up and approved by the Riverside Public Works Department.¹⁴

Today the bridge continues to act as a thoroughway from the Arlington Heights area to the major downtown business district. It is generally considered to be one of the outstanding features of Riverside's architectural and engineering heritage.

ENDNOTES

1. Riverside Daily Press, "The Opening of Victoria Bridge," 27 November 1891, p. 3; Riverside Press and Horticulturist, "The Opening of Victoria Bridge," 5 December 1891, p. 1; Jane Davies Gunther, Riverside County, California, Place Names: Their Origins and Their Stories, (Riverside, CA: Published by author, 1984), pp. 557, 558.

2. Riverside Daily Press, "The Opening of Victoria Bridge," 27 November 1891, p. 3; Riverside Press and Horticulturist, "The Opening of Victoria Bridge," 5 December 1891, p. 1.

3. Ibid.

4. The Riverside Morning Enterprise, announced the festivities in the "Local News" column with the following: "The formal opening of Victoria Bridge today promises to be quite a grand affair. The ceremony will take place at 2:30 p.m." Riverside Morning Enterprise, 26 November 1891, p. 5;

5. Riverside Daily Press, "The Opening of Victoria Bridge," 27 November 1891, p. 3; Riverside Press and Horticulturist, "The Opening of Victoria Bridge," 5 December 1891, p. 1; Riverside Daily Press, "New Victoria Span Dedicated," 18 September 1928, p. 2.

6. Tom Patterson, "Victoria Bridge: A City Showpiece That's Done its Job for 51 Years," Riverside Press-Enterprise, 24 February 1980, p. B-2.

7. Ibid.

8. Riverside Daily Press, "New Victoria Span Dedicated," 18 September 1928, p. 2.

9. Ibid.

10. Robert V. Leeson, set of six engineering drawings of Victoria Bridge, approved 6 September 1927. (Riverside Public Works Department: Riverside, CA).

11. Riverside Daily Press, "New Victoria Span Dedicated," 18 September 1928, p. 2.

12. Weight limits, briefly, are based on the number of axles a vehicle has. In California at the time of the Caltrans inspections weight limits were: 25 tons for dump trucks or cement trucks and the like; 36 tons for semi-trailer trucks; and 40 tons for full-trailer trucks. Riverside Press-Enterprise, "Official's Inaction May Have Hurt Bridge," 11 January 1980, p. C-1.

13. William Gerdner, quoted by Riverside Press-Enterprise, "Official's Inaction May Have Hurt Bridge," 11 January 1980, p. C-1. Posted limits for the bridge are now set at 18 tons for the first category (see note 11); 26 tons for the second; and 36 tons for the third.

14. "Victoria Avenue Bridge Repair, Plan No. R-2281," (Riverside Public Works Department: Riverside, CA), 1980.

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Riverside (CA) Public Works Department. "Victoria Avenue Bridge Repair, Plan No. 2281." On file at Riverside Public Works Department, Riverside, CA, 1980.

"The Opening of Victoria Bridge," Riverside Daily Press, 27 November 1891, p. 3.

"The Opening of Victoria Bridge," Riverside Press and Horticulturist, 5 December 1891, p. 1.

SECONDARY SOURCES

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Patterson, Tom. "Victoria Bridge: A City Showpiece That's Done Its Job for 51 Years." Riverside Press-Enterprise, 24 February 1980, p. B-2.